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A radio discussion by W. R. Beattie, Bureau of Plant Industry, delivered in the Department of Agriculture period of the National Farm and Home Hour, broadcast by a network of 48 associate NBC radio stations, Tuesday, March 6, 1934.

Hello Folks: Last Thursday at the conclusion of my talk on growing fruit for home use, Mr. Salisbury suggested that perhaps by today I might be able to give you some idea as to the extent of injury to fruit trees due to the excessively low temperatures that have prevailed over a considerable portion of the northeastern fruit region this winter. According to newspaper reports the peach growers of Virginia, West Virginia, Western Maryland, Pennsylvania and New York concede that the peach crop is almost entirely killed. I talked with a Maryland grower whose orchard is located between Washington and Baltimore and he said that his observations led him to believe that perhaps 10% of the buds on his older peach trees are alive but that practically all of those on his younger trees are killed.

The following report on the condition of the New York crop appeared in the report of the Bureau of Agricultural Economics under date of February 28. (Quote) "Losses in the fruit crop of New York State, ranging from 10 percent in apples and small fruits to complete destruction of all fruit buds in peaches and sweet cherries, are predicted by Prof. G. P. Van Esseltine of New York Experiment Station at Geneva, on account of the low temperatures in most sections of the State this winter. Plums, pears, sour cherries, and quinces will probably not produce more than half a crop, he says. The estimates are based on records of injuries sustained in other seasons of severe cold, notably the winters of 1895-96, 1903-04, and 1917-18, and on the fact that lower temperatures have been experienced this winter in many sections than at any previous time." (End:quote)

It will be some time before the full extent of injury to peaches and other tender fruits can be ascertained, and in the meantime those of us who have home orchards or commercial plantings should make our plans to give the trees the proper treatment in order to get them back into proper bearing condition as soon as possible. In the case of peaches this can often be accomplished in one season, provided the injury to the main branches is not too great. I've known of cases of winterkilling where the main branches of peach trees were killed to within a few inches of the main trunk. Under those conditions it becomes necessary to grow a whole new top or grub out the trees and plant new ones. Severe killing of the wood of peach trees may be expected whenever the thermometer gets down around 15 below zero or lower, especially where we have rather warm weather proceeding the low temperatures. In some sections we had a fairly warm period in January and where this occurred we naturally expect greater freezing injury. This injury is often spoken of as "frozen sap" and can be detected by the discoloration of the inner bark on the twigs as soon as the weather warms up.

Prompt and fairly heavy pruning of the trees just as soon as the extent of the injury can be ascertained is the first step toward their rehabilitation. You might give your trees a little extra feeding in the form of 2 or 2½ pounds of nitrate of soda, sulphate of ammonia or other quickly available fertilizer to start them off this spring. Scatter the fertilizer all over the ground under the tree and two or three feet beyond the tips of the branches for that is where the feeding rootlets are located. Later you might give the soil in your orchard a light dressing of manure also 2 or 3 pounds per tree of a complete fertilizer then follow with a summer cover crop of soy beans, cowpeas or other legume to add humus to the

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soil. Of course the new growth that you get on your damaged trees will depend to some extent upon the kind of a season you have, rainfall and so on but if you do your part you'll stand a good chance of getting your trees back into bearing shape in one season.

The same methods should be followed in the reconditioning of plums and cherries, although the chances are in favor of their coming through with little or no injury. Even where the fruit buds are frozen and killed the wood may be all right and you will only lose the crop of the coming year. In case the dormant fruit buds of this year are killed it would be a good idea for you to take this opportunity to do any extensive heading back or pruning that your trees may need. Plum trees of certain varieties have the habit of shooting up into the air and in case the buds are winterkilled you can head back the trees without loss of crop.

Most of us have a tendency to neglect our fruit trees during seasons when they do not bear a crop. That's a great mistake because the crop of next year is very largely made this year. You should fertilize, cultivate, and spray your trees even though they do not carry a crop. Of course, you would omit certain of the sprays that are merely for the protection of the fruit itself, but the sprays that are for the protection of the foliage should go on just the same. If your trees are not cared for during their off-crop years you may find them all loaded up with leaf diseases by the time they do put on a crop. I have never found it possible to get a crop of all kinds of tree fruits every year, and if I get a crop three years out of five, I think I am doing fairly well.

Small fruits, especially strawberries, are much more certain to bear than the tree fruits, and yet I shall not be surprised if we hear about a lot of winter injury to raspberries, blackberries, dewberries and grapes.